

AMENDMENTS TO THE CLAIMS

Please cancel claim 13 without prejudice or disclaimer of its underlying subject matter.

1. (CURRENTLY AMENDED) A method of manufacturing an open polyimide molding product which comprises;

bringing a polyimide film into an intimate contact with a molding die having a concave molding surface so as to tightly close an open end thereof to form a space on the side of the molding die surrounded by the polyimide film and the concave molding surface;

disposing a pressing die to the open end of the molding die so as to seize the polyimide film to form a space on the side of the pressing die surrounded by the polyimide film and an inner surface of the pressing die;

causing the polyimide film to be deformed by pressurizing with gas from an initial stage to a final stage and plasticizing the polyimide film through a contactless heating in a manner such that the polyimide film is maintained not to contact the concave molding surface;

bending, during the initial stage, to deform the polyimide film under contactless heating only by pressurizing gas in the space on the side of the pressing die; and

at the final stage of the bending deformation, simultaneously depressurizing gas in the space on the side of the molding die and pressurizing gas in the space on the side of the pressing die thereby bringing the polyimide film into intimate contact with the concave molding surface to eliminate a gap between the polyimide film and the concave molding surface,

wherein the concave molding surface has a depth and the final stage commences when the bending deformation of the film reaches a distance in a range of approximately 40% to 99% of the depth of the concave molding surface.

2. (PREVIOUSLY PRESENTED) A method of manufacturing an open polyimide molding product as defined in claim 1, wherein the polyimide film is heated in a contactless manner by disposing a heating portion to the pressing die and/or the molding die thereby radiating radiation heat and/or releasing a heating gas from the pressing die.

3. (PREVIOUSLY PRESENTED) A method of manufacturing an open polyimide molding product as defined in claim 2, wherein a porous metal or a number of pores are disposed to the concave molding surface of the molding die and the inner surface of the pressing die, and the space on the side of the molding die is depressurized and/or the space on the side of the pressing die is pressurized by way of the porous metal or the pores.

4. (CURRENTLY AMENDED) A method of manufacturing an open polyimide molding product as defined in ~~claim 2 or 3~~ claims 1 to 3, wherein a cooling portion is disposed to the molding die and/or the pressing die, and the shape of the polyimide film after molding is fixed by the cooling effect of the cooling portion and/or releasing the cooling gas from the pressing die.

5. (PREVIOUSLY PRESENTED) A substrate for a reflector for use in illumination equipment manufactured from an open polyimide molding product obtained by the manufacturing method as defined in any one of claims 1 to 3.

6. (PREVIOUSLY PRESENTED) A substrate for a reflector for use in illumination equipment manufactured from an open polyimide molding product obtained by the manufacturing method as defined in claim 4.

7. (PREVIOUSLY PRESENTED) An apparatus for manufacturing an open polyimide molding product for practicing the method as defined in any one of claims 1 to 3, wherein a molding section is constituted with a molding die having a concave molding surface and a pressing die in press contact with an open end of the molding die, the molding die is connected with a negative pressure source and the pressing die is connected with a pressurization source.

8. (PREVIOUSLY PRESENTED) An apparatus for manufacturing an open polyimide molding product for practicing the method as defined in claim 4, wherein the molding section comprises a molding die having a concave molding surface and a pressing die in press contact with an open end of the molding die, the molding die is connected with a negative pressure source and the pressing die is connected with a pressurization source.

9. (PREVIOUSLY PRESENTED) An apparatus for manufacturing an open polyimide molding product as defined in claim 7, wherein a film supply mechanism for supplying and setting a polyimide film to the molding section is disposed.

10. (PREVIOUSLY PRESENTED) An apparatus for manufacturing an open polyimide molding product as defined in claim 8, wherein a film supply mechanism for supplying and setting a polyimide film to the molding section is disposed.

11. (PREVIOUSLY PRESENTED) An apparatus for manufacturing an open polyimide molding product as defined in claim 7, wherein a molding product take out mechanism is disposed for taking out a molding product from the molding section.

12. (PREVIOUSLY PRESENTED) An apparatus for manufacturing an open polyimide molding product as defined in claim 8, wherein a molding product take out mechanism is disposed for taking out a molding product from the molding section.

13. (CANCELED)